Abstract of the Disclosure

SERIAL MULTISTAGE AEROSOL DILUTER AND CONTROL SYSTEM

An exhaust gas sampling system for use in connection with the sampling of an internal combustion engine exhaust gas streams has a plurality of diluters arranged in a serial array along an axial extent. A source of engine exhaust gas is fluidically connected to the plurality of serially arranged diluters so as to supply an engine exhaust gas stream into each one of the plurality of serially arranged diluters in a serial manner. A source of dilution air fluidically is connected to each one of the plurality of serially arranged diluters so as to supply dilution air into each one of the plurality of serially arranged diluters. The dilution air is supplied into the engine exhaust gas stream present within each one of the plurality of serially arranged diluters so as to progressively dilute the engine exhaust gas stream as the engine exhaust gas stream flows through the plurality of serially arranged diluters and thereby replicate engine exhaust gas stream pollutant atmospheric conditions, and sampling apparatus fluidically connected to each one of the plurality of serially arranged diluters for obtaining and analyzing a sample of diluted engine exhaust gas stream present within each one of the plurality of serially arranged diluters.

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